

CHEMICAL HERITAGE FOUNDATION

MARK D. BIGGIN

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Marcia L. Meldrum

at

Yale University
New Haven, CT

on

4, 6-7 March 1996

From the Original Collection of the University of California, Los Angeles

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ABSTRACT

Mark D. Biggin grew up in Chesterfield, England, near the Peak District National Park, where he cycled the moors and hills from an early age. He attended a local school, tracked on the basis of his IQ. He remembers one inspiring teacher of biology, from whom he developed an early interest in science, originally wanting to be a veterinarian. He attended the University of Lancaster in Lancaster, England; he so loved working in a lab that he applied to graduate school at Cambridge University, where he joined Frederick Sanger's Division at the Medical Research Council Laboratory of Molecular Biology. There he worked in Bart Barrell's lab, where he sequenced Epstein-Barr virus DNA. He became interested in transcription and took up a post-doc at Robert Tjian's lab at U.C. Berkeley. He focused on gene expression in *Drosophila*; on even-skipped (*eve*), *zeste*, *GAGA*, and *NTF*; and on homeodomain proteins. He then moved to a professorship in Department of Molecular Biophysics and Biochemistry at Yale University, where he continues to teach, advise graduate students, and work in the laboratory he started up. He is attempting to define the function of promiscuous homeodomain protein binding—activation and repression—to discover how homeodomain proteins interact in the cell.

UCLA INTERVIEW HISTORY

INTERVIEWER:

Marcia L. Meldrum, postdoctoral fellow, UCLA Department of History. B.A., History, University of Minnesota; M.B.A., Boston University; M.A. and Ph.D., History of Science and Medicine, State University of New York at Stony Brook.

TIME AND SETTING OF INTERVIEW:

Place: Biggin's office, Yale University.

Dates, length of sessions: March 4, 1996 (84 minutes); March 6, 1996 (89); March 7, 1996 (52).

Total number of recorded hours: 3.75

Persons present during interview: Biggin and Meldrum.

CONDUCT OF INTERVIEW:

This interview is one in a series with Pew scholars in the biomedical sciences conducted by the UCLA Oral History Program in conjunction with the Pew Charitable Trusts' Pew Scholars in the Biomedical Sciences Oral History and Archives Project. The Project has been designed to document the backgrounds, education, and research of biomedical scientists awarded four-year Pew scholarships since 1988.

To provide an overall framework for Project interviews, the director of the UCLA Oral History Program and three UCLA faculty project consultants developed a topic outline. In preparing for this interview, Meldrum made arrangements by telephone and electronic mail to visit Biggin at Yale, agreed to a tentative interviewing schedule, and requested copies of Biggin's major articles and an updated curriculum vitae. In addition to these materials, Meldrum reviewed the documentation in Biggin's file at the Pew Scholars Program office in San Francisco, including the proposal application, letters of recommendation, reviews of the application, and progress reports. For general background on the field of developmental biology, Meldrum consulted recent issues of *Cell*, *Nature*, and *Science*, and attended two lectures by Dr. Evelyn Fox Keller, who has done extensive research on the history of the field.

The interview is organized chronologically, beginning with Biggin's childhood in Chesterfield, England, and continuing through his education at Lancaster University and at Cambridge University, his postdoctoral work at the University of California, Berkeley, and the establishment of his own laboratory at Yale University.

Major topics discussed include the interactive functioning of various homeodomain proteins in *Drosophila* in controlling spatial and temporal patterns of gene expression, the role

of redundancy in regulatory interactions and science funding in the United States.

ORIGINAL EDITING:

Gregory M.D. Beyrer, editorial assistant, edited the interview. He checked the verbatim transcript of the interview against the original tape recordings, edited for punctuation, paragraphing, and spelling, and verified proper names. Words and phrases inserted by the editor have been bracketed.

Biggin reviewed the transcript. He verified proper names and made a number of corrections and additions.

Jane Collings, editor, prepared the table of contents. Derek Denardo, editorial assistant, assembled the biographical summary and interview history. Beyrer compiled the index.

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